
Module 1: Introduction to the Superfund Program

Module Objectives

- ❑ Explain the legislative history of Superfund**
- ❑ Describe the relationship between Superfund and other environmental programs**
- ❑ Define release, hazardous substance, National Contingency Plan, National Priorities List, potentially responsible party and operating unit**

Module Objectives (cont.)

- ☐ **List the basic steps in the Superfund remedial program**
- ☐ **Identify the three kinds of removal actions**
- ☐ **Identify key objectives for Superfund**
- ☐ **List the three ways in which a site can be listed on the NPL**
- ☐ **Explain DOE's Superfund public involvement policy**

Purpose of Superfund

❑ Why a Superfund Program?

- Clean up inactive hazardous waste management area
- Make responsible parties (RP) pay
- Contribute to prevention of chemical releases

❑ Therefore, Superfund includes:

- Direct government response program
- Enforcement program
- Reporting of releases
- EPA, State, and Community partnership

Legislative and Regulatory Framework

- ❑ **CERCLA -- Comprehensive Environmental Response, Compensation, and Liability Act of 1980**
 - Remedial Actions = long-term responses
 - Removal Actions = short-term mitigation of emergencies
 - \$1.6 billion Trust Fund (5 years)
- ❑ **SARA -- Superfund Amendments and Reauthorization Act of 1986**
 - Broadened and toughened enforcement authorities
 - Established statutory requirements and expectations for cleanup
 - \$8.5 billion Trust Fund (5 years)
- ❑ **Lots of current reform proposals**

Legislative and Regulatory Framework

❑ National Contingency Plan

- Nation's blue print for responding to oil spills and hazardous substances releases.**
- First developed in 1968 to cover oil spills**
- Revised in 1980 (under CERCLA) to include federal response to hazardous substances releases**

Scope of the Superfund Program

- ❑ Superfund response authority covers: "Releases" or threatened "releases" of hazardous substances that pose threats to human health or the environment
- ❑ Spilling, leaking, pumping, pouring, injecting, discharging, dumping, disposing, escaping, and leaching
- ❑ Types of releases excluded from Superfund's response authority:
 - Releases resulting in exposure solely in workplace
 - Emissions from engine exhaust of vehicles
 - Nuclear releases subject to Atomic Energy Act
 - Naturally occurring substances (asbestos, radon)

Scope of the Superfund Program

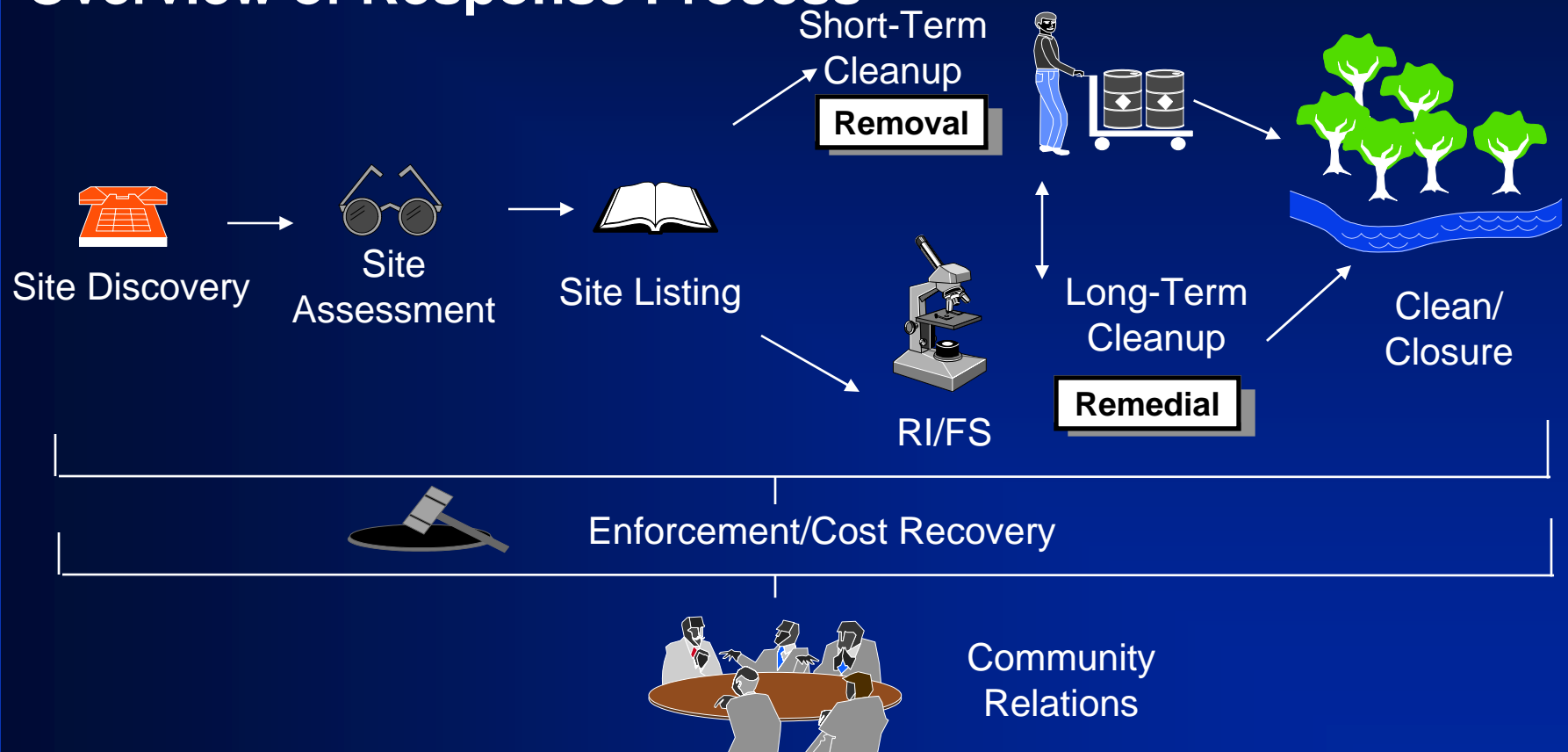
What are "Hazardous Substances?"

- ❑ Other statutes define "hazardous substances":
 - Federal Water Pollution Control Act (Clean Water Act) pollutants
 - Resource Conservation Recovery Act (RCRA) solid and hazardous wastes
 - Clean Air Act pollutants (including radionuclides)
 - Toxic Substances Control Act chemicals
- ❑ Superfund may designate its own contaminants or pollutants
- ❑ Petroleum and its products are specifically excluded

Introduction to the Superfund Program

The Superfund Response Process

Overview of Response Process



Superfund Remedial Program

- ❑ Preliminary Assessment
- ❑ Site Inspection
- ❑ Remedial Investigation
- ❑ Feasibility Study
- ❑ Record of Decision
- ❑ Remedial Design
- ❑ Remedial Action
- ❑ Operations and Maintenance
- ❑ Construction Complete
- ❑ NPL Site Deletion
- ❑ Community Relations

The Superfund Response Process

□ Key Cleanup Objectives

- SARA mandates that remedial actions**
 - Protect human health and the environment**
 - Meet Federal and State requirements (ARARs)**
 - Be cost effective**
- SARA also specifies that remedial actions should**
 - Result in permanent solutions**
 - Use treatment to reduce the toxicity, mobility, or volume of wastes to the extent practicable**
- Removal actions must remove immediate threats**

Superfund Removal Program

- ❑ Removals can take place any time (even when clean up will be completed through a long-term remedial action)
- ❑ Authority to take quick action to remove or mitigate an imminent threat, or to stabilize a site prior to initiating long-term remediation activities
- ❑ Do not require listing on the NPL

How Sites are Placed on the NPL

- ❑ **National Priorities List (NPL)--Official list of Superfund sites in long-term remedial program**
- ❑ **Three mechanisms**
 - **Site evaluation and Hazard Ranking System (HRS) scoring (most common)**
 - **One-time state or territorial designation**
 - **Special threat determination**

Remedial Program: The PA/SI Process

- ❑ Together, called “site assessment” by EPA
- ❑ Preliminary Assessment (PA)
 - Quick screen
 - No sampling
- ❑ Site Inspection (SI)
 - Limited sampling to verify releases
- ❑ Hazard Ranking System (HRS)
 - Superfund site ≥ 28.5

Community Relations Requirements

- ❑ Public comment on proposed NPL listing
- ❑ Conduct local interviews
- ❑ Prepare community relations plan
- ❑ Establish information repository, and notify public of availability
- ❑ Inform public of TAGs
- ❑ Public comment on Record of Decision
- ❑ Public notice of final ROD
- ❑ Public notice of certain ROD changes
- ❑ Public notice and comment on notice of intent to delete

DOE Public Involvement Policy

- ❑ **Involve public early and often**
- ❑ **Superfund community relations *requirements* insufficient to meet DOE policy**
- ❑ **Typical DOE site public involvement activities include briefings, multiple public notices and meetings and development of fact sheets and other informational materials**

CERFA and DOE

- ❑ **The Community Environmental Response Facilitation Act of 1992**
 - **Amends CERCLA**
 - **Federal agencies must identify areas where hazardous materials have never been stored, released, or disposed**
 - **Facilitates DOE transfer of real property for economic redevelopment**

A Couple of Key Definitions

❑ Potentially Responsible Party (PRP)

- Entity judged by EPA to be currently responsible for the site, and therefore financially responsible for the cleanup
- DOE

❑ Operable Unit (OU)

- A method of breaking up a large site into smaller “chunks”
- Each OU can be remediated separately

Module Summary

- ❑ **CERCLA and SARA were enacted to give EPA authority and funding to clean up abandoned, severely contaminated hazardous waste sites**
- ❑ **Superfund clean ups must comply with ARARs-- other relevant environmental laws and agreements**
- ❑ **Releases include any form of discharge into the environment of a hazardous substance**

Module Summary (cont.)

- ☐ **There are currently about 800 Superfund hazardous substances--petroleum is excluded**
- ☐ **Potentially Responsible Party--DOE**
- ☐ **National Priorities List--list of Superfund Sites**
- ☐ **National Contingency Plan--Superfund implementing regulation**
- ☐ **Operating Unit--subset of a single Superfund Site**
- ☐ **Public involvement activities take place throughout the process**

Module Summary (cont.)

- ❑ **Major steps in Superfund are**
 - **Site discovery, assessment, and NPL listing**
 - **Site characterization and alternatives evaluation**
 - **Formal agreement documented in a ROD**
 - **Remedial Design**
 - **Remedial Action/Construction**
 - **Operations and Maintenance**
 - **Construction Complete/Closure**

Exercise 1

Decision-making Under Uncertainty in Superfund

□ Objectives

- Practice making early decisions about potential Superfund sites.**
- Generate discussion about some of the key concepts to be covered in the course.**